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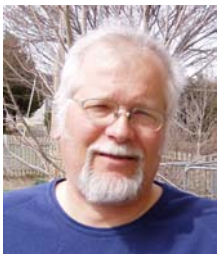

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Plant Disease in Kansas

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HIGHLIGHTS

Stripe rust of wheat has just entered the state. Recent survey found isolated and scattered pustules in a few wheat fields this past week.

Powdery mildew of wheat was the most significant foliar disease on wheat during survey. Severities were moderate to high in some south central varieties.

In forest survey, Hypoxylon canker and Armillaria root rot were identified in burr oak stands of eastern Kansas. In northern red oak, Hypoxylon was again common to stands.

Greenhouse inspections have found some viral problems in production including Impatiens Necrotic Spot but more alarming are what appear to be increased thrip and aphid populations which vector certain viruses.

OUTLOOK

Cooler weather has kept leaf rust in check in wheat production fields over most of the state. Powdery mildew has continued to increase because of this cool cloudy weather pattern which might hold on for a couple more weeks. Look for powdery mildew to increase in severity. Wheat streak mosaic and barley yellow dwarf problems should be visible as fields near boot in southern and western locations.

FOREST STANDS

The Kansas Department of Agriculture and the Kansas Forestry Service are working together to look at stand problems of native oaks this spring. In early survey of sites in eastern Kansas, *Hypoxylon* canker was common to northern red

oak stands in Franklin (EC) County and burr oak stands in Lyon (EC) and Morris (EC) counties. In addition to the *Hypoxylon* canker, *Armillaria* root rot was observed in Morris County on the burr oak.

Figure 1. *Hypoxylon* fungus on red oak will form a grayish colored pad with embedded black fruiting structures.

WHEAT

Wheat disease was surveyed across southwest, south central and to a lesser extent central Kansas over the past two weeks (Appel, KDA). Most fields were in late joint stages and nearing the boot stage.

Common to fields was speckled leaf blotch. The disease was present in almost all of the fields visited with varying incidences of 20 to 100 per cent. New infection of mid canopy leaves was present in central and south central counties where disease pressure was the greatest. Leaf rust was found in about twenty per cent of the fields but only as a "light spackling" of disease. New pustules were sometimes found on mid canopy leaves but disease was primarily found on lower dying leaves. Tan spot was observed for the first time of season in the south central counties of Reno, Kingman, Sumner, and Sedgwick. Incidence was highest in fields with corresponding levels of wheat straw. Infection was just beginning with spotting of dark brown centers surrounded by yellow halos.

Stripe rust has been epidemic to Kansas wheat and resulted in significant yield losses during recent years. The disease was observed for the first reports of this season on April 12th. The reports were made in Gray (SW) County and later on in the week in Kingman (SC), and Sumner (SC) counties. Pustules were yellowish orange and in linear stripes. The pustules had not yet erupted and at 1-3% incidence in those specific fields.

Powdery mildew was the important disease in terms of severity. Severity at the Coldwater variety plot in Sedgwick (SC) County was rated at 60 to 80% on

susceptible varieties such as Gem and Jagalene. In field survey, severities were not observed at this level although a few fields were rated at about 20% severity in Sumner County.

Figure 2. Powdery mildew of wheat

Wheat viruses were a mixed bag. Wheat streak mosaic was common like speckled leaf blotch to many fields in the southwest quarter of the state. It was also reported in several fields in Russell, Stafford, and Pratt in the central region of the state. In one Kingman county field, one third of the field was heavily infected and the remaining field was at low incidence. The reason for this was unclear as planting date/growth or relation to volunteer wheat did not appear to be different. Possibly different varieties were planted in the same field which would account for demarcation of infection.

Other reports were of early symptoms of barley yellow dwarf and a few reports of wheat spindle streak. Wheat spindle streak was moderate to heavy in the Coldwater variety plot mentioned earlier in the report. This location was the original site where wheat spindle streak was identified in Kansas.